

IX. *Contributions to an Insect Fauna of the Amazon Valley* (Coleoptera, Prionides). By H. W. BATES, F.Z.S., Pres. Ent. Soc.

[Read 15th March, 1869.]

THE following pages contain a description of the genera and species of Longicorn *Coleoptera*, Tribe *Prionides*, obtained by me in the region of the Amazons, and are a continuation of a series of papers commenced in the *Annals and Magazine of Natural History*, in July, 1861. Those papers completed the tribe *Lamiides*, leaving for subsequent publication the tribes *Prionides* and *Cerambycides*. My reasons for postponing the continuation of the work, on the completion of the first part, were the want of a general classification of the Longicorns founded on a study of the whole family, and a conviction of the inconvenience to science of partial classifications applicable only to a single fauna. Such a classification I was compelled to invent for the *Lamiides* group; which, although it seemed to suit well the material I had before me, I afterwards found impossible to reconcile with the arrangements proposed by other writers, probably equally well-suited to other faunas. This was especially the case with the classification adopted by Mr. Pascoe for the Longicorns of the Malay Archipelago, and the inconvenience to which I have alluded was felt in this way, that it was impossible, with two such distinct arrangements, to institute those comparisons which all Naturalists find so interesting, between the faunas of these two equatorial regions. The work which all Coleopterists interested in this family have been so long expecting, the eighth volume of Lacordaire's "Genera" has at length appeared, containing a new and well-considered classification of the family, and there is no longer need to delay the description of my collections. In so difficult a group it would be presumptuous to alter this classification, without a laborious study of material, as large as that which has been at the command of Professor Lacordaire; and to do so in a partial manner would hinder rather than forward the progress of our knowledge of the group; I shall, therefore, adopt it implicitly in the following descriptions, although I believe, in some points, it is far from natural in its arrangement.

According to Lacordaire, the Longicorns are divisible into three tribes; the *Lepturides*, formerly considered by most authors as a fourth tribe, being sunk to the rank of a subordinate group under the *Cerambycides*. Having traced the successive modifications of the forms allied to *Lepturides*, in the order given by Lacordaire, I have recognized the justice of this arrangement, and the error of the opinion expressed in the introduction to the *Lamiides* of the Amazons, on the same subject. The *Prionides* are distinguished from the two other tribes by the pronotum being distinct from the flanks of the prothorax, and by the anterior coxæ lying in transversely-elongated sockets. In common with the *Cerambycides*, they differ from the *Lamiides*, by the palpi never terminating in points, and the anterior tibiæ being simple instead of grooved on their inner sides.

The number of *Prionides* obtained by me from the Amazons is only twenty-six; a small proportion of the whole number found in Tropical America, namely 166. A great many, however, described from other quarters, will probably be found to be varieties or opposite sexes of other species; in confirmation of which opinion I may point to the seven false species of one genus only, *Pyrodes*, which I have reduced to synonyms in the following descriptions. But the equatorial plains seem to be less rich in the group than the borders of the tropics, or the mountainous regions. The species are mostly nocturnal in their habits, and of great rarity. When found *in situ*, it is generally on the trunks, or under the bark, of the largest forest trees. They fly abroad at night, and are sometimes overtaken by a sudden storm, and cast into lakes or rivers, whence the swell carries them to the sandy beaches; several of the species here recorded have been found under these circumstances. I have not thought it necessary to insert in the *Prionides* the sections and "tribus" of Lacordaire; the genera follow in the order of his classification.

I. PRIONIDES ABERRANTES.

Genus PARANDRA.

Latr. Hist. Nat. des Crust. et Ins. xi. p. 252.

1. *Parandra gracillima*, n. sp.

P. elongata, angustata, mandibula dentibus molaribus basalibus contiguis, apice tridentatis, orbitu oculorum

valde elevato acuto, thorace regulariter et forte angustato ab apice usque ad basin, elytris fortiter punctatis.

Long. ♂ (mandib. incl.) 9 lin.

A distinct species remarkable for the gradual tapering of the thorax from apex to base; so that near the base it is no broader than the length. The mandibles agree in shape with the group to which *P. mandibularis* of Perty belongs, that is, they have in the ♂ a very large basal or molar tooth, the opposing teeth meeting in the centre, near the apex is an acute tooth, and the apex itself, being notched, forms two others; above, each mandible has a sharply-defined triangular depression, and the surface is rather coarsely punctured, and black. The submentum is not separated from the gula or throat by an impressed line; it is very broad, blackish, opaque, and is covered with very large and shallow circular pits, the anterior edge has not a raised border or impressed line, and the anterior angles are broad, and very obtuse. The orbit behind the eyes is very abruptly elevated, its upper edge being above the level of the eyes. The head and thorax are finely punctured, the elytra coarsely punctured, and the whole surface less shining than in the allied species.

I took one example only of this species (the only *Parandra* found on the Amazons) at Ega, under the bark of a dead tree.

The genus *Parandra* has been excluded from the family of Longicorns, by some modern authors, and restored to its place recently by Lacordaire. It may perhaps be objected to the arrangement of the latter, that he includes it in an artificial group termed "*Prionides aberrants*," with a number of forms such as *Hypocephalus*, *Sceleocantha*, &c., with which it has nothing in common, except the fact of being aberrant. *Parandra* would seem rather to be an extreme development of the *Mallodon* type of *Prionides*; its chief peculiarity, namely, linear tarsi, with an onychium furnished with two bristles between the tarsal claws, being lessened in importance by the fact of a typical Prionid of the *Mallodon* group, *Hystatus*, (Thoms.), possessing a distinct onychium. I have moreover noticed that the onychium is absent, or extremely reduced and destitute of bristles, in at least one species, the North American *P. brunnea*, F. Another character of the genus, the distinct fourth joint of the tarsi,

doubtless arises from the absence of lobes in the third joint, for in all *Prionides* where these lobes are reduced in amplitude, the fourth joint is more or less visible. No importance is to be attached to the form of the ligula, this point being excessively variable in the *Prionides*.

II. PRIONIDES VERI.

Cohort 1. *Subterranei*.

Genus PSALIDOGNATHUS.

G. R. Gray, in Griffith's An. King. Ins. ii. 115.

1. *Psalidognathus Incas*.

P. Incas, Thoms. Arc. Nat. p. 42.

P. Limenius, Erichs. Archiv. für Nat. 1847, i. 139, ?.

♀. *Ps. cupreo-violaceus*; a femina *Ps. Friendii* dif-
fert, 1° antennis articulo 3io rugoso-punctato, 2°
elytris magis subtiliter vermiculato-rugosis, et magis
distincte tricostatis, 3° prosterno fortiter scabroso.

One example, a female, obtained at Tabatinga, on the
frontier of Brazil and Peru.

Cohort 2. *Sylvani*.

Genus ENOPLOCERUS.

Serville, Ann. Soc. Ent. Fr. 1832, p. 146.

1. *Enoplocerus armillatus*.

Lin. Syst. Nat. ii. 622; Oliv. Ent. 66, pl. v. f. 17, ♂.

E. maximus, elongato-oblongus, brunneus, cinereo-
tomentosus, elytris cinnamoneis nudis, antennis
pedibusque nigris nitidis, ♂ scabrosis, ♀ lævi-
bus.

Long. unc. ♂ 3-4 $\frac{1}{4}$, ♀ 3 $\frac{1}{2}$.

I obtained three examples only of this species; on the
Upper Amazons, on the trunks of dead trees.

Genus ORTHOMEGAS.

Serville, Ann. Soc. Ent. Fr. 1832, p. 149.

1. *Orthomegas cinnamoneus*.

Lin. Syst. Nat. ii. 623; Drury, Ill. i. 89. t. 40. f. 2, ♀.

O. oblongo-linearis, cinnamoneus, aureo-fulvo sericeus, lævis; thorace lateribus pone medium dente magno obliquo, antice denticulis duobus vel tribus armato.

Long. 22-30 lin. (♂, ♀).

Found occasionally, in repose on leaves in the forest, throughout the Amazons region.

Genus MACRODONTIA.

Serville, Ann. Soc. Ent. Fr. 1832, p. 140.

1. *Macrodonia cervicornis*.

Lin. Mus. Lud. Ulr. p. 65; Oliv. Ent. 66, pl. 2, f. 8.

M. magna, depressa, rufo nigroque varia, elytris flavo-rufis, lineis plagisque nigris variegatis.

Long. unc. 2½-4. (♂, ♀.)

A rare insect on the Amazons; on dead trees, banks of the Tapajos, and at Ega.

2. *Macrodonia crenata*.

Oliv. Ent. 66. p. 27, pl. 12. f. 45, ♀.

♂. A ♀ differt spina anteriore thoracis brevissima, et mandibulis multo longioribus. Oblonga, depressa, fusco-castanea, elytris cinnamoneis. Caput supra concavum, grosse punctatum, mandibulis capite sequi longioribus, triquetris, cum antennarum basi (articuli reliqui desunt) nigris. Thorax transversus, quadratus, basi valde angustatus, lateribus inter spinas rectis, crenulatis, angulo antico spina minuta acuta oblique antrorsum spectante armato, spina postica majore sed brevi, angulis posticis distinctis acutis; supra creberrime punctatus, medio plaga longitudinali lineisque aliquot elevatis nitidis, sparsim punctatis. Elytra marginibus pone humeros valde explanatis, margine foliaceo usque ad apicem extenso sed sensim

angustato, apice late rotundato, angulo suturali spinoso; supra opaca, subtiliter alutacea, cinnamonea, absque lineis elevatis. Corpus subtus nitidum, impunctatum, castaneum. Pedes nigro-castanei, nitidi.

Long. ♂ (mandib. incl.) 28 lin.

I am not aware that the male of this very rare species has been heretofore described. It differs greatly from the female in the punctuation of the thorax, and in the size of the antero-lateral spine. A similar sexual difference exists in *M. flavipennis* (Chevrolat), the female of which is named *serridens* in Chevrolat's collection, and in *M. Dejeanii* (Gory); the male in all these species having a finely punctured opaque thorax, with a glossy space in the middle, and the female being uniformly scabrous-punctate, slightly shining.

I met with one example only of *M. crenata* on the Amazons, near Ega.

Genus TITANUS.

Serv. Ann. Soc. Ent. Fr. 1832, p. 133.

1. *Titanus giganteus*.

Linn. Mant. p. 531; Drury, Ill. iii. p. 73, pl. 49. f. 1, ♀.

T. (♂, ♀) fusco-castaneus, thorace lateribus trispinosis, supra punctato-rugoso, medio late impunctato, tibiis ♂ intus multispinosis, ♀ lævibus, antennis utroque sexu dimidium corporis haud excedentibus, segmento ultimo ventrali ♂ in medio late exciso, ♀ integro.

Long. 4½-6 unc.

In addition to the sexual differences mentioned in this short diagnosis, may be mentioned the much greater width of the tarsi in the ♂ than in the ♀. The tarsi of the ♂ are of remarkable width, and the second joint is transverse quadrangular, instead of triangular as in the ♀ and in Longicorns generally. On the Amazons this colossal Longicorn was found only near Manaos, on the Rio Negro; where it is occasionally picked up on the shores of the river after a stormy night, the insect being cast into the water whilst flying across.*

* In the system of Lacordaire the group *Ancistrotides* follows the *Titanides*, but in a note on a subsequent page (Genera, viii. p. 163) he justly doubts whether they would not be better placed near the group *Tragosomides*. The following new species of *Acanthinodera* (group *Ancistrotides*) tends in favour of this emendation.

Genus CTENOSCELIS.

Serv. Ann. Soc. Ent. Fr. 1832, p. 134.

1. *Ctenoscelis ater*.

Oliv. Ent. 66, p. 11, pl. 7, f. 24, ♂.

Ct. piceo-niger, tarsis posticis lobis angustissimis et longe spinosis; elytris apice apud suturam sinuatis, angulo suturali spinoso.

Long. $3\frac{1}{2}$ - $3\frac{3}{4}$ unc. (♂. ♀).

♂. Thorax minutissime et creberrime punctatus, disco utrinque plagis angustis tribus grosse scabrosis nitidis; antennæ longitudine corporis, intus denticulatae; tarsi lobis intermediis et posticis spinosis.

♀. Thorax omnino grosse scabrosus; antennæ dimidium corporis attingentes, punctatae; tarsi lobis omnibus spinosis.

I obtained many specimens of this fine species at Ega, on the Upper Amazons, on the trunks of large felled trees.

2. *Ctenoscelis Dyrhacus*.

Buquet, Ann. Soc. Ent. Fr. 1843, p. 235, pl. 9,
fig. 1, ♂.

Ct. piceo-niger, tarsorum lobis ovatis, haud spinosis; thorace utroque sexu scabroso, medio lævi, nitido; antennis articulo basali breviori et validiori; elytris apice nec sinuatis nec dentatis.

Long. 3 unc. 4 lin.—4 unc. 4 lin. (♂ ♀); lat. elytr. (♂) 18 lin.

Acanthinodera bihamata, n. sp.

♂. Oblonga, depressa, rufo-castanea, tibiis tarsisque flavo-castaneis, capite, thorace, scutello et pectore quam *A. Cumingii*, ♂, minus dense flavo-lanuginosis, puncturis grossis capitis thoracisque patentibus. Antennæ robustæ, leviter serratae, corpore paulo longiores, articulis subæqualibus, primo punctato, reliquis lævibus. Thorax transversus, lateribus utrinque antice valde bihamatis. Elytra oblongo-quadrata, depressa, marginibus explanatis, apice sub-truncata, angulo suturali spinoso, supra subtiliter alutacea et elevato-reticulata costis quatuor vix perspicuis. Pedes elongati, graciles, valde compressi, sparsim hirsuti; tarsi elongatis, linearibus, articuli tertii lobis angustissimis acutis.

Long. 11 lin.

Hab.—Mendoza. A Dom. Ed. Steinheil recepta.

♂. Antennæ longitudine corporis, articulis basalibus tribus aspere punctatis, omnibus intus denticulatis; tarsi omnes lati, lobis rotundatis.

♀. Antennæ dimidium corporis attingentes, tenuiter punctatæ, nec denticulatæ; tarsi lobis compressis.

The thorax is coarsely scabrous on the sides in both sexes, and has a broad shining space in the middle, finely punctured; the basal joint of the antennæ is shorter and thicker than in any other known species. The female has not before been described.

The species occurred at Santarem, Obydos and Manaos, on the Amazons.

3. *Ctenoscelis Nausithous*.

Buquet, Ann. Soc. Ent. Fr. 1843, p. 236, pl. 9,
f. 2, ♂.

Ct. gracilior, thorace angustior; piceo-niger, thorace scabroso, spatio mediano lævi subtiliter punctato; elytris apice rotundatis, angulis suturalibus dentatis. Long. 3 unc. 4 lin.

♂. Antennæ corpore longiores, articulis extus breviter tuberculatis, tribus basalibus subtiliter punctatis, reliquis lævibus.

♀. Antennæ dimidium corporis superantes, sparsim punctatæ; tarsi lati, lobis posticis acutis.

The shape of this species is much more slender than in the rest of the genus; the thorax of the female is scarcely to be distinguished from that of the same sex in *Ct. Dyrrhacus*, but the elytra differ in being much narrower, and especially more parallel-sided; the tibiæ also are relatively longer, and more slender.

I met with one example only of this species, a female, at Serpa, near the mouth of the River Madeira. Not being acquainted with the male, I have drawn up the above imperfect diagnosis from the description of M. Buquet, who obtained the insect from Bolivia.

Lacordaire founds his generic characters of *Ctenoscelis*, in great measure, on the sexual differences in the punctuation of the thorax, as shown in *Ct. ater* and *acanthopus*; this part of his diagnosis will no longer be applicable, as *Ct. Dyrrhacus* and *Nausithous* show no such differences.

Genus IALYSSUS.

J. Thomson, Syst. Ceramb. p. 296.

1. *Ialyssus tuberculatus*.

Oliv. Ent. 66, p. 20, pl. 6, f. 22.

I. oblongus, fusco-castaneus, elytris (basi scabrosa excepta) rufo-ochraceis, lævibus, opacis, angulis suturalibus spinosis; antennarum articulis primo et tertio longitudine æqualibus.

♂. Thorax subtiliter creberrime punctato-rugosus, opacus, disco utrinque plaga triangulari lineisque duabus, et basi linea transversali, elevato-scabrosis, nitidis.

♀. Thorax omnino scabrosus.

Long. 2 unc. 4 lin.

I found one example only, a male, of this rare species; at Ega, washed up on a sandy beach, after a storm, on the river Teffé.

Genus MALLODONHOPLUS.

J. Thomson, Classif. des Ceramb. p. 320; Lacord. Genera, viii. p. 117.

Distinguished from the genus *Mallodon* by the femora and tibiæ, at least of the anterior legs, being armed with rows of short denticulations, and by the scabrous punctuation of the thorax. The portion of Lacordaire's definition relating to the mandibles, will have to be modified, to include the following species, which is undoubtedly congeneric with the type species, *M. nobilis*.

1. *Mallodonhoplus crassidens*, n. sp.

M. oblongus, paullulum convexus, piceo-niger, capite grossissimè punctato, labro antice ligulâque fulvo-hirsutis, mandibulis capite brevioribus (♂) extus à basi valde rotundato-dilatatis vel tumidis, apice acutissimis, supra scabrosis, intus concavis vix hirsutis et margine interiori medio dilatato quadridentato; antennis dimidium corporis superantibus,

articulo primo grosse punctato; thorace quadrato, supra scabroso, in medio elevationibus indistinctis duabus lævioribus; elytris vix nitidis, passim crebre minus profunde punctatis, angulis suturalibus spinosis; sternis omnibus grosse punctatis, pedibus anticis denticulatis, tarsis piceo-rufis; ventris segmentis singulis valde convexis.

Long. ♂ (mand. incl.) 2 unc. 4 lin.

Very similar in shape and sculpture to *M. nobilis*, Thoms., from Venezuela, the thorax being almost exactly of the same outline and surface; it differs in being entirely black, in the absence of fulvous hairs from the epistome, and in the great thickness of the mandibles. These organs are much shorter than the head, and are abruptly dilated externally, the apex of each ending in a long acute point, and the inner edge about the middle being advanced, and armed with four short broad teeth, nearly as in *Mallodon spinibarbis*. The elytra have a marked convexity from base to apex.

I met with only one example of this species, at Ega, cast up on a sandy beach, after a storm.

Genus MALLODON.

Serville; Lacord. Genera, viii. p. 125.

1. *Mallodon spinibarbis*.

Lin. Mus. Lud. Ulr. p. 67.

M. piceo-niger, elytris castaneis, vel omnino fusco-niger, capite grosse punctato, genis sub mandibulis prolongatis acutis; thorace plagis politis septem, interstitiis in ♂ subtiliter crebre punctatis, in ♀ scabrosis; elytris subtilissime sparsim punctatis; processu prosternali plano, ♂ crebre punctato, ♀ glabro.

A widely-distributed insect, found sometimes in great numbers, under the loose bark of felled trees; it is very unstable in the outline of the thorax in both sexes, but it may always be distinguished from the nearest allied species by the angles of the cheeks below the mandibles forming a simple point, instead of being bifid. I have specimens from Mexico, Cayenne, and Rio Janeiro, as well as from the Amazons.

2. *Mallodon bajulus*.

M. bajulus, Erichs. Consp. Ins. Col. Peru. p. 138.

M. occipitale, Thomson, Physis, I. p. 93, ?.

♀. "Oblongus, depressus, fusco-niger, nitidus, genarum processu bidentato: prothoracis disco polito, medio serie punctorum obsoletorum longitudinali notato, lateribus punctato-rugosis, margine obtuse crenulato, angulis posterioribus denticulo acutiusculo terminatis, elytris punctulatis. Long. 1" 5'"." (Erichs.).

♂. Mandibulis brevibus, suprâ et infra grosse punctatis; capite grosse confluentur punctato; thorace plagis septem elevatis politis, omnibus (exteriori utrinque excepta) basi conjunctis, interstitiis crebre grossius punctatis; elytris distincte punctatis; processu prosternali convexo, vix punctato.

Hab.—St. Paulo, Amazons.

I think it extremely probable that *M. occipitale*, Thoms., from Venezuela, belongs to the same species: specimens before me referable to this species differ only in the finer punctuation of the elytra. *Mallodon bajulus*, of Erichson, has been generally cited as the ♀ of *Chiasmometes Limæ* of Guérin, but Erichson's diagnosis lends no support to such an inference; the terms "depressus—genarum processu bidentato" being quite inapplicable to *Chiasmometes*; on the contrary, they fit the present species of *Mallodon* which I found in the same tract of country where Erichson's insect was discovered by the traveller Tschudi. M. Thomson makes no mention, in his monograph of *Mallodon*, of the form of the anterior angles of the cheeks, without which it is scarcely possible to give satisfactory descriptions of the species.

Genus STICTOSOMUS.

Serville; Lacord. Genera, viii. p. 144.

A remarkable genus, distinguished by its oblong-linear depressed form, long acute mandibles curving downwards

and a little backwards towards the apex, and by the extremely long claw-joint of the tarsi; the third joint of the antennæ is nearly as long as the four following taken together, and is thickened and cylindrical.

1. *Stictosomus semicostatus*.

Serv. Ann. Soc. Ent. Fr. 1832, p. 153.

St. oblongus depressus, niger, passim grosse punctatus, elytris costis quatuor distinctis.

Long. 1 unc. 10 lin. ♂.

One example, found near Montes Aureos, in the interior, East of Pará.

Genus POLYOZA.

Serville; Lacord. Genera, viii. p. 152.

1. *Polyzoa lineata*, n. sp.

P. oblongo-linearis, rufo-fulva, elytris utrinque suturâ et carinis quatuor elevatis, interstitiis nigris: antennis (♂) dimidium corporis vix superantibus, articulis 3—8 basi laminas elongatas emittentibus.

Long. 11 lin. (♂).

Resembles in form *P. Lacordairei*; the head, palpi, mandibles, and eyes offer scarcely any difference: the thorax has on each side three teeth, the foremost one very small, and the hindmost pointing towards the shoulders of the elytra; its surface is sculptured in a raised reticulate pattern. The elytra offer a raised suture and four carinæ, the interstices of which are of a dark colour, the whole surface is finely rugose-punctate, and the sutural angle acute, but not spinose. The antennæ are very much shorter than in *P. Lacordairei*, and the long foliaceous appendages to the joints placed more closely together. The underface and legs are finely punctate-granulate and hairy, and of a paler hue.

One example, taken in a dead tree at Ega.

Cohort 3. *Pæcilosomi*.

Genus MALLASPIS.

Serville, Ann. Soc. Ent. Fr. 1832, p. 188.

The characters of this genus, in Lacordaire's "Genera," derived from the antennæ, especially those of the ♀, are no longer applicable, since species have lately been discovered* which differ from the types in this respect. In fact, there is now no character to distinguish the genus from *Pyrodes*, except the pilose scutellum.

* These are as follows.

Mallaspis Beltii, n. sp.

Species distinctissima, antennis in utroque sexu articulis linearibus, colore ♀ a ♂ valde diverso; mesosterno et metasterno sutura distincte divisis.

♂ Long. 18-20 lin.

Oblonga, convexa, postice attenuata, æneo-castanea, capite thoraceque æneo-fuscis, antennis tibiis et tarsis rufo-castaneis. Caput magnum, elongatissimum, subremote modice punctatum; lateribus parallelis, fronte, late sulcata. Thorax pone medium valde dentatus, antice in linea subrectus, angustatus, minute irregulariter denticulatus, pone dentem sinuatus, angulis posticis nullis, supra æqualis, modice crebre punctatus, subnitidus, lateribus rugulosus. Elytra parte basali convexa, postice declivia, apice oblique truncata, angulo suturali prominenti acuto, humeris antice protrusis, supra prope basin vermiculato-punctata, postice subtiliter punctato-coriacea. Corpus subtus æneum, griseo-tomentosum; pedes rufo-castanei, femoribus obscurioribus. Antennæ corpore paulo longiores, rufæ, articulis a 3^o omnibus linearibus, 3^o paulo latiori sed lineari, ultimis duobus basi intus spinosis. Scutellum aureo-tomentosum.

♀ 15 lin. Forma ♂ similis; postice minus angustatus, capite breviori; thorace et elytris basi fortiter rugoso-punctatis, colore omnino saturate-æneo vel obscure-cyaneo, antennis pedibusque cyaneis; corpore subtus glabro. Antennæ corporis dimidio longitudine æquales, articulis linearibus, cyaneis. Processus prosterni canaliculatus.

Hab.—Chontales, Nicaragua. Dom. Belt invenit.

Mallaspis Salvini, n. sp.

M. Beltii proxime affinis; eadem differentia sexuum formaque prothoracis et antennarum.

♂ Long. 15-16 lin. Oblonga, depressa, postice attenuata, supra tota læte ænea, subtus aureo-refulgens. Caput thorax et elytra ut in *M. Beltii*, sed illud grossius punctatum nitidum, hæc prope apices minus attenuata, obtusius rotundata. Antennæ corpore longiores, articulis duobus ultimis basi tuberculatis, rufæ. Pedes rufi, femoribus æneotinctis.

♀ 15 lin. *M. Beltii* ♀ forma et colore simillima; caput multo grossius rugoso-punctatum; antennæ omnino violaceæ; processus prosterni haud canaliculatus.

Hab.—Costa Rica. A Dom. Salvin receptus.

1. *Mallaspis scutellaris*.

Oliv. Ent. 66, p. 14, pl. 2, a. b.

M. obscure ænea, elytris basi excepta cinnamoneis, thorace lateribus antice rotundatis et multidenticulatis, antennis articulis 4-7 basi et apice 8-11 totis rufis, ♂ corpore multo longioribus articulis compressis denticulatis, ♀ brevioribus articulis dilatato-compressis.

Extremely rare; found only at Nauta, on the Upper Amazons.

Genus PYRODES.

Serville; Lacord. Genera, viii. p. 177.

1. *Pyrodes pulcherrimus*.

P. pulcherrimus, Perty, Del. An. Art. Bras. p. 86, t. 17, f. 4, ♀.

P. fastuosus, Erichs. Consp. Ins. Col. Peru. p. 139, ♀.

P. heterocerus, Erichs. Consp. Ins. Col. Peru. p. 139, ♂.

P. antennatus, White, Cat. Long. Brit. Mus. p. 51, pl. 2, f. 6, ♂; Lucas, Voy. de Castelnau, Ins. pl. 10, f. 8, ♂.

P. petalocerus, White, Cat. Long. Brit. Mus. p. 50, ♂.

♂. Medio valde convexus, colore variabilis, fusco-ferrugineus vel æneo-fuscus, vel antice ferrugineo-cupreus, postice ferrugineus; scutello apice prolongato; antennis articulo tertio magno lato compresso, azureo, reliquis rufis; capite thorace et scutello crebre æqualiter punctatis; elytris vermiculato-coriaceis; femoribus cyaneis.

♀. Azureus vel cyaneus, elytris rugulosis nitidis, fascia lata ante medium flavescenti-alba; antennis cyaneis, articulo tertio simplici lineari. Variat thorace maculis duabus rufis.

This beautiful and singular species was not infrequent at Ega. The two sexes, as here described, have always been considered distinct species; but the fact that all of one form are males, and all of the other females, and that they are invariably found together, on the trunks of trees, induces me to consider them as pairs, although I never found them *in copulâ*.

2. *Pyrodes Smithianus*.

White, Proc. Zool. Soc. 1850, p. 12.

P. pulcherrimo (♀) formâ similis, thorace latiori, lateribus antice rotundato-dilatatis. Cupreo-æneus, elytris aureo-viridescentibus; antennis brevibus tenuibus; thorace elytris latiori, cum capite et scutello crebre distincte punctatis; scutello elongato; elytris sutura et costis duabus utrinque elevatis, crebre rugosis.

Long. 15 lin. (♀).

I found one specimen of this species on the foliage of a low tree, at Caripi, near Pará. Unfortunately it was not reserved for my private collection, and I have drawn up the above diagnosis from the type specimen in the British Museum, which was found by Mr. J. P. G. Smith, also at Caripi.

3. *Pyrodes formosus*, n. sp.

P. pulcherrimo (♀) formâ simillimus, colore omnino læte saturato-cæruleus, plagis duabus elytrorum violaceis exceptis; caput thorax et scutellum subopaci, confertim punctati; antennæ ut in *P. pulcherrimo* (♀) lineares, vel prope apicem incrassatæ, cyaneæ; elytra fortiter, prope apices vix minus forte, vermiculato-rugulosa, angulis suturalibus haud productis, nitida; corpus subtus, et pedes, saturate cærulei.

Long. 15-18 lin. ♀.

Two female examples only of this beautiful species were found, near St. Paulo, Upper Amazons. In the British Museum there is a specimen from Cuenca, Ecuador, entirely of a beautiful greenish-blue colour, and rather more coarsely sculptured.

4. *Pyrodes gratiosus*, n. sp.

P. bifasciato, Linn., affinis, minor, colore ♀ valde diverso, et antennis distincte 11-articulatis.

♂. Oblongus, læte æneo-viridis, nitidissimus, elytris testaceo-translucentibus. Caput et mandibula sparsim punctata, illo antice aureo, sulco frontali fundo lævi. Thorax quadratus, lateribus denticulatis,

medio fortiter dentatis, angulis posticis dentiformibus, suprâ grosse punctatus, disco impressione magna trilobâ. Scutellum læve. Elytra oblongo-quadrata, tertia parte basali grosse punctato-rugosa, dein subito crebre subtiliter rugosa; viridi-ænea, basi et medio testaceo translucientia. Corpus subtus glaberrimum, prosterno gibbo, lævi. Antennæ corpore paulo longiores, robustæ, filiformes, nigræ, articulis 4 basalibus cupreis. Pedes rufi, geniculis fuscis.

Long. 6 lin.

♀. Oblongus, saturate cyaneus, capite thoraceque grossius punctatis, vix nitidis, elytris basi tantum micantibus, miniato-rubris, fascia sub-basali curvata purpureo-nigra. Sulcus frontalis fundo lævis. Thorax ut in ♂ quadratus, lateribus medio dente forte armatis, angulis posticis dentiformibus, punctatus scabrosus, medio impressione magna triloba. Scutellum grosse punctatum, opacum. Elytra oblonga, basi convexa, prope basin fortiter punctato-rugosa, dein subito subtiliter rugosa. Antennæ corpore paulo breviores, minus robustæ, filiformes, cyaneæ, basi cupreo-violaceæ, articulis 3-7 supra sulcatis. Corpus subtus cyaneum, nitidissimum. Pedes cyanei, geniculis et tibiis apice violaceis, tarsis rufis.

Long. 10-12 lin.

This beautiful species is readily distinguished in the female from *P. bifasciatus* by the elytra having only one dark fascia, and that near the base, commencing below the shoulder, and curving towards the suture, which it does not reach; the rest of the elytral surface is of a clear red-lead colour, or dark vermillion, almost opaque, except near the base, where it has a metallic lustre. The slender 11-jointed antennæ distinguish it at once from the female of *P. nigricornis*, Guér., besides the colour. I obtained three female specimens of precisely similar colours, two of which are in my own collection. The males of these closely-allied species are less easily to be distinguished; I obtained only one example with the three females; but have seen a second, similar in size, in Mr. Fry's collection, also from Pará. The antennæ are notably more slender than in the ♂ of *P. nigricornis*, and the terminal joint is much less elongate, being very little longer than the penultimate, whilst it is half as long

again in *P. nigricornis*. The species seems peculiar to the neighbourhood of Pará. *P. bifasciatus* is found at Surinam and Demerara, and all the female specimens I have examined have the two terminal joints of the antennæ blended into one elongate joint, with a trace of the articulation.

5. *Pyrodes nodicornis*, n. sp.

♀. *P. bifasciato* simillimus, gracilior, antennis 10-articulatis, thoracis angulis posticis haud prominentibus. Oblongus, nigro-cyaneus, supra vix nitidus, subtus politissimus. Caput et thorax grosse crebre punctati, hoc quadrato angusto, in medio paulo dilatato et valde dentato, angulis posticis haud prominentibus, supra impressione profunda triloba. Elytra postice haud attenuata, medio vix rotundata, supra præcipue versus basin et suturam grosse rugoso-punctata, læte miniata, fascia lata communi prope basin (margines haud attingente) alteraque apicali (cum precedente vitta lata suturali conjuncta) cyaneo-violaceis. Pedes cyanei, violaceo-micantes. Antennæ corpore paulo breviores, graciles, articulo decimo precedentibus latiori, colore cupreo-violaceæ, articulo tertio haud sulcato.

Long. 11 lin., lat. 5 lin. ♀.

One example, taken at St. Paulo, Amazons. Very similar in form and colour to *P. bifasciatus*; differs in the tenth antennal joint being short and ovate, without trace of constriction in the middle, and also in the absence of projecting hind angles to the thorax.

6. *Pyrodes nigricornis*.

P. nigricornis, Guérin, Verhandl. zool.-bot. Verein zu Wien, 1855, p. 598, ♂.

P. rubrozonatus, Lucas, Voy. de Castelnau, Entom. p. 180, pl. xi. f. 2 (1857) ♂.

♂. Breviter oblongus, variat vel fulvo-testaceus æneo tinctus, antennis (basi excepta) violaceo-nigris, vel aureo-viridis splendens, elytris semifascia rufa, vel cupreo-violaceus, fascia elytrali integra, vel

pallidus, pedibus rufis, vel ut ante coloratus, pedibus rufis femoribus tibiisque posticis plus minusve violaceo-metallicis. *P. gratioso* differt antennis magis robustis, articulis brevioribus, elytris grossius punctato-scabrosis, thoracis angulis posticis dentiformibus. Latitudo thoracis variat.

Long. 8 lin. ♂.

♀. Breviter oblongus, cyaneus, elytris violaceis, basi splendide cupreis, pone medium fascia interrupta rufa; thoracis angulis posticis dentiformibus; antennis robustis, corpore multo brevioribus, 11-articulatis, articulo tertio haud sulcato: tarsis rufis.

I took many specimens of this species at St. Paulo, Amazons, on the leaves of trees in the forest. One pair were taken *in copulâ*. I have examined Guérin's type of *P. nigricornis*, and found it to agree with the palest of my specimens. It was probably taken in the same locality as mine, by Osculati, who spent some time at the village of St. Paulo on his voyage down the Amazons.

7. *Pyrodes dispar*, n. sp.

P. precedentibus affinis, differt pedibus grosse et profunde punctatis.

♂. Oblongus, læte viridi-æneus; thorace inæquali, grosse punctato, scabroso, lateribus medio spinosis, angulis posticis dentiformibus. Elytra passim crebre et grossius punctato-scabrosa. Pedes rufi, grosse et profunde punctati, femoribus tibiisque posticis cyaneis. Antennæ corpore breviores, robustæ, filiformes, cupreæ, articulo ultimo cum precedente quasi concreto.

Long. 8 lin.

♀. Breviter oblongus, affinibus multo latior; violaceus, supra passim crebre rugosus, sulci frontalis fundo haud lævi, thoracis disco haud foveato, angulis posticis dentiformibus. Elytra plaga basali, altera laterali pone medium, et margine exteriori inter has, rubro-cupreis. Corpus subtus cupreo-nitidum, abdomine crebre punctato, pedibus cyaneis, grosse et profunde punctatis. Antennæ dimidium corporis vix excedentes, cyaneæ, 10-articulatæ, articulo tertio haud sulcato, decimo precedente latiori et duplo longiori.

The nearly coalescent two terminal joints of the antennæ will distinguish the male of this from the three preceding species, as well as the much more deeply and roughly punctured femora and tibiæ; the other characters, and the colour, I think, may be more variable. The female is distinguished from all by its great width of body, and coarsely punctured femora and tibiæ. It differs greatly from *P. nodicornis* in general form of body, and in the prominent dentiform hind angles of the thorax. The two terminal joints of the antennæ are blended into one in both species, without trace of separation, but the joint thus formed is short and ovate in *P. nodicornis*, and very elongate in *P. dispar*.

I have seen one pair only of this species, taken by Mr. J. Hauxwell, at Pebas, on the Amazons.

In this group of *Pyrodes*, the scutellum seems to afford no reliable specific characters, as it varies in shape and sculpture in specimens undoubtedly belonging to the same species; the form is nearly as in the common *P. speciosus*, but its apex is more prolonged. In all the species where the hind angles of the thorax are produced, the lower margin is also dentiform, giving an appearance of two teeth at the angle, one above the other. The margin of the thorax anterior to the lateral spine, in all the species, is irregularly and variably denticulate. The general form and colours of the *bifasciatus* group are so variable, that if future discoveries prove the terminal joints of the antennæ to be variable, the whole will constitute one variable species, remarkable for its inconsistency in structural characters.*

* The genus *Pyrodes*, after withdrawing *P. pictus* (Perty) which having the sides of the scutellum pubescent is better placed in *Mallaspis*, and *P. columbinus* (Guér.) which belongs to the genus *Esmeralda*, contains the following species: 1. *P. pulcherrimus* (ut supra). 2. *P. formosus*. 3. *P. tenuicornis*, White, ♂ (♀ = *marginatus*, White, Catal. p. 49, ♂ = *angusticollis*, Lucas, Voy. de Casteln., p. 179, pl. 11. f. 1; the description leaves no doubt whatever of this synonym, and the locality given by Lucas must be erroneous). 4. *P. Smithianus*, White. 5. *P. speciosus*, Oliv. 6. *P. æneus*, Buq., Ann. Soc. Ent. Fr. 1860, p. 618. 7. *P. bifasciatus*, L., Oliv. 8. *P. nigricornis*, Guér. (*rubrozonatus*, Lucas). 9. *P. gratiosus*. 10. *P. nodicornis*. 11. *P. dispar*. There remains only one undescribed species in all the extensive collections of Longicorns which I have examined in London; this is a fine one from New Granada, represented by a single female example, in Mr. Fry's possession, derived from the Dejean-Laferté Collection.

Genus ESMERALDA.

J. Thomson, *Classif. des Ceramb.* p. 303 ; Lacord.
Genera, viii. p. 178.

Distinguished from *Pyrodes* by the great width and length of the scutellum, which, in the male, is nearly half the length of the elytra ; and by the metasternum being greatly advanced between the middle coxæ, and nearly hiding the grooved mesosternum, which lies obliquely on its anterior face ; the prosternum is also of great width, and its point does not interlock with the mesosternum. The antennæ in the ♂ are very robust, compressed, and subserrate ; the tibiæ also are compressed into thin blades in both sexes, and the tarsi are excessively short.

The only species of this charming group hitherto described is *E. suavis*, Thoms. But I have no doubt whatever of this being the ♂ of *Pyrodes columbinus*, of Guérin (said by White, erroneously as I think,* to be the *Cerambyx auratus* of Linnæus). I captured the male and female of the following species together, but not *in copulâ*, on the trunk of a slender tree, and as the differences between them are not at all greater than in many species of *Pyrodes*, the conclusion that they are sexes of one and the same species is not to be resisted.

1. *Esmeralda lætifera*, n. sp.

♂. Oblonga, depressa, viridi-ænea, nitidissima, capite antice et infra thoraceque toto testaceo-rufis aureo-tinctis, femoribus 4 anticis et processu metasternali rufis, elytris violaceis, subtilissime rugoso-punctatis, bicostatis, triente basali excepta sparsim punctatis.

Long. 6 lin.

♀. Latè oblonga, subdepressa, læte cyanea, scutello et corpore subtus violaceis.

Long. 9½ lin.

Differs from *E. columbina*, Guér. (♂, *suavis*, Thoms.) in both sexes, by the basal third of the elytra being glossy, and marked with very few punctures ; the scutellum has a few very fine punctures on each side. The

* The phrase of Linnæus "elytra rubro-viridi-aurata" is not at all applicable to any specimen of *E. columbina* which I have seen.

thorax in the ♂ has its lateral margins free from crenulations, and is of a tawny-orange colour above and beneath, except a narrow mark on the hind margin on each side; above, it has a few strong punctures on the sides, and in the deep central fovea. In the ♀ the thorax is crenulate on the sides, and has numerous large punctures on the sides and in the central fovea, most of the elevated portions being impunctate. The posterior part of the elytra, in both sexes, is rendered rough and opaque by the extreme closeness and minuteness of its punctuation. In the ♂, the middle coxæ, the greater part of the anterior and middle femora, and the broad metasternal process, are fulvous-red.

I met with one pair only of this species, on the trunk of a slender tree, in a small clearing in the forest, near St. Paulo, on the Amazons. They were actively moving about in the heat of the mid-day sun.

The following genus seems to be a degraded form of the *Pyrodes* type, wanting the grooved mesosternum, the sulcate head, and many other minor characters of the group. Its projecting metasternum indicates a nearer affinity with *Esmeralda* than with the *Pæcilosominæ*, in which group it is placed by Lacordaire. No other member of the *Pæcilosominæ* or *Solenopterinae* is found on the Amazons.*

* The following very interesting species has recently been discovered by Mr. Belt at Chontales, Nicaragua; it connects the two North-American genera *Holonotus* and *Sphenostethus*.

Holonotus nigroæneus, n. sp.

Elongatus, convexus, scaphiformis, *Sphenostetho serripenni* similis, sed scutello haud elongato, aterrimus nitidus, supra præcipue elytris æneotinctus. Caput parvum, supra late sulcatum, grosse sparsim punctatum. Antennæ (♀) dimidio corporis breviores, articulis valde compressis latis, vix punctatis. Thorax a basi usque ad apicem attenuatus et declivis, marginibus lateralibus integris, disco sparsim subtiliter, lateribus grosse et rugose punctatus, margine postico elytris angustiore, utrinque sinuato, lobo mediano truncato. Scutellum latum, triangulare, apice depressum, læve. Elytra a basi usque ad apices regulariter attenuata, humeris obliquis rotundatis, apicibus rotundato-truncatis serratis; supra coriacea, subnitida, passim modice punctata. Subtus glaber, pectoris lateribus punctatis, vix pilosis; mesosternum crassum, apicem prosterni incumbens. Pedes nigerrimi, nitidi, tarsis brevibus, latis.

Long. 1 unc. 2 lin., lat. 5 lin. ♀.

Hab.—Chontales, Nicaragua; in Mus. nostr.

Genus NICIAS.

Nicias, J. Thomson, Arch. Entom. i. p. 136.

Hamadryades, Thomson, *lib. cit.* p. 22 (*olim*).

1. *Nicias alurnoïdes*.

J. Thomson, Arch. Ent. i. p. 23, pl. 9, f. 3.

N. niger, nitidus, elytris stramineis, quarta parte apicali maculaque utrinque mediana transversa nigris; abdomine rufo-testaceo.

Long. 7 lin. ♀.

I found two examples of this pretty and singular Prionid, on different days, on the foliage of trees at Ega; one of them is now in my own collection, the other I believe was sent to Paris. The beautiful figures of M. Thomson render further description unnecessary.
